

Guest Presentation

FHWA – TMIP
Model Estimation Webinar Session 9
Kermit Wies, CMAP
July 16, 2009



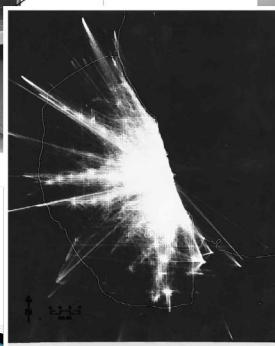
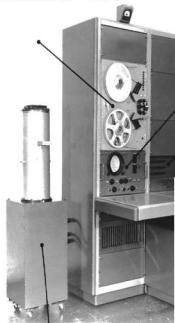
Chicago Metropolitan
Agency for Planning



CMAP's Research and Analysis Work Program

Legacy – Vision – Goals

CMAP's R&A Work Program: 50 Year Modeling Legacies



- CATS formed in 1955
- Pioneer in data collection and the 4-step model
- Large household survey
- Early computer application
- In 1962: a 3-volume transportation plan for 1980
- Subsequent transportation plans for 2000, 2010, 2020 and 2030

CMAP's R&A Work Program: Strategic Vision

authoritative source
for regional data:

- Collection
- Exchange
- Dissemination
- Analysis
- Evaluation and
- Modeling



CMAP's R&A Work Program: Goals for a new modeling framework

- ▶ Respond to changing policy priorities
- ▶ Assess adequacy of existing models
- ▶ Attend to needed improvements



Goals for a new modeling framework: Changing policy priorities

- ▶ Managing growth and land development
- ▶ Environmental stewardship
- ▶ Transportation choices
- ▶ Economic development



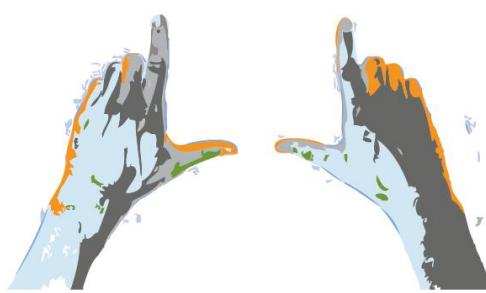
Goals for a new modeling framework: adequacy of existing models

- ▶ Strategy and scenario responsiveness
- ▶ Robust representation of behavior and choice

<i>Data Task</i>	<i>Primary Challenge</i>
<i>Collection</i>	<i>Frequency</i>
<i>Exchange</i>	<i>Cooperation</i>
<i>Dissemination</i>	<i>Visualization</i>
<i>Analysis</i>	<i>Competency</i>
<i>Evaluation</i>	<i>Comprehensiveness</i>
<i>Modeling</i>	<i>Robustness</i>

Goals for a new modeling framework: needed improvements

- ▶ Population synthesis
- ▶ Activity-based demand estimation
- ▶ Network microsimulation
- ▶ Land use prediction and feedback



Population Synthesis

MainFRM

- Run New Analysis
- Open Saved Run
- Results Visualizer
- HELP
- Quit
- About

Population Synthesis Program - UIC TransLab 2007

File Definition | Control Variable Definition | Settings (FINISH) | Scenario Builder | Forecasting

Choose the HOUSEHOLD data file to use
Choose File
Selected Microdata File:

Choose the ZONE data file to use
Choose File
Selected Marginal Data File:

Enter a PROJECT name.
Project name:
project1

NEXT >

- ▶ Turn planning strategies into modeling components :
- Households into demographic elements
 - Jobs into employment sectors
 - Forecast and scenario context

Activity-based demand estimation

• Travel Inventory

• Symposium

• Cadre

• Strategic Plan

CMAP Advanced Urban Model

Scope of Work - CMAP is developing a strategic plan to develop and implement advanced travel mode

On May 13, 2009, the CMAP Board approved the competitive selection of the following five individuals to

- John Bowman
- Kostas Goulias
- Ram Pendyala
- Tom Rossi
- Peter Vovsha

Included in each member's contract is a set of [general tasks and deliverables](#).

Also included in each outline is a topical outline of the final deliverable. This outline will be

Based on the general work scope presented and the qualifications received, the cadre is or lead will also be responsible for the quality and timeliness of deliverables. Each individual

The three teams are:

- [Policy Response](#) – Lead: Tom Rossi
- [Data Development](#) – Lead: John Bowman
- [Computing Environment](#) – Lead: Peter Vovsha

Each team leader will, as a first task, assemble their team from the remaining four cadre members.

The three team leaders (Rossi, Bowman, Vovsha) will be offered "full" appointments of 150

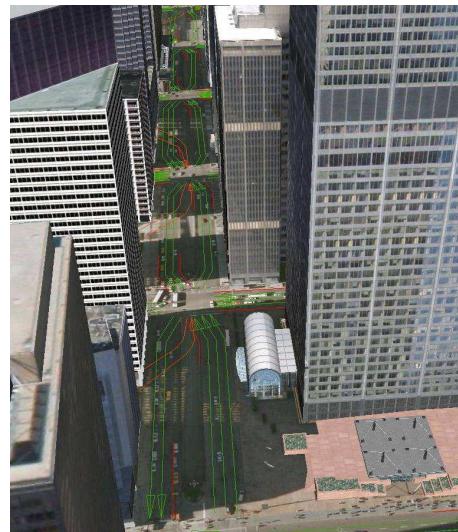
Network Microsimulation

► TRANSIMS
development needs:

Activity based demand interface

Transit, freight, aviation operations

Emergency and incident capabilities



Land Use Prediction and Feedback

► Access product

Composite Utility of Transportation Performance

Land Value Index



CMAP's challenges

- ▶ Evolution of the MPO function
- ▶ Role of data analysis and evaluation
- ▶ Creativity, flexibility and adaptability

